

REMARKS

Appropriate subject headings have been added to the specification.

In the Office Action, the Examiner rejected Claims 1-9 under 35 U.S.C. §112, second paragraph.

Reconsideration is requested.

Numerous amendments to Claims 1-9 have been made to improve the original translation and more accurately define the scope of the claims. Specifically, the "and/or" in Claim 1 has been eliminated and the use of the phrase "characterized in that" has been removed from all claims. Additional amendments, as can be seen above and in the attached marked up version of the claims, have been made to improve the overall syntax of the claims. It is therefore requested that the §112, second paragraph rejection be withdrawn.

In the Office Action, the Examiner rejected Claims 1-9 under 35 U.S.C. §103(a) as being unpatentable over Gerber (U.S. Pat. No. 5,788,500) (hereinafter Gerber) in view of Lebensfeld et al. (U.S. Pat. No. 6,302,796) (hereinafter Lebensfeld et al.) and further in view of Dyer et al. (U.S. Pat. No. 4,653,760) (hereinafter Dyer et al.).

Reconsideration is requested.

Claim 1 has been amended to recite "solar cells" instead of "photovoltaic cells". This amendment is made to correct an error made in translation of the original Italian application. In Italy the terms photovoltaic cell and solar cell are often confused. Photovoltaic cell is translated as "cella fotovoltaica" and solar cell is translated as "cella solare", whereas "fotocellula" means an ordinary photocell

or photo-resistor. The root "cella" is the same for both photovoltaic cells and solar cells, and therefore sometimes becomes confused (as opposed to "cellula" for a photocell). On page 7, lines 1-7 the present application teaches that the sensors on the vest or helmet have a reduced thickness compared with ordinary photocells. Also, on the same page, lines 8-14 teach that the sensors have a "plane", and are "flexible". These are characteristics that can only apply to solar cells. Therefore it is believed that this amendment is not new matter. Moreover, none of the cited prior art teaches the use of "solar cells".

Claim 1 has also been amended to recite a "red film" which is applied to the surface of the sensor (i.e. solar cell) to act as an optic filter by removing emissions in the upper band of the visible light spectrum (specification at page 7, line 23). Additionally, the flashing of the signaler (60) has been further described as "green" (see specification page 10, line 7).

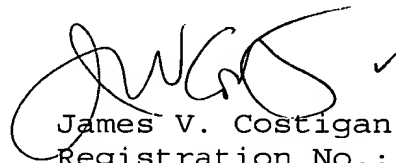
It is believed that amended Claim 1 is not obvious in view of Gerber, Lebensfeld et al. and Dyer et al. Gerber does not teach a solar cell which must receive a "direct" hit from a light source. In contrast Gerber has components that allow indirect scattered light to register as a hit, thereby mimicking shrapnel or deflected bullets (col. 3, line 33-42). Also, there is no teaching in the cited prior art of an optic filter such as the red tape over the sensors in the present invention.

Additionally, Gerber teaches "equipment status" such as killed, near miss or battery failure (see col. 10, lines 60-61), Lebensfeld et al. teaches a variety of games, one of which employs a shot count (see col. 9, line 56-60) and Dyer et al. teaches a weapon system that uses a "dummy magazine"

inserted into a regular weapon, wherein the "dummy magazine" is part of the invention and the system will not operate without it (see col. 3, lines 20-30), however, these patents do not render the present invention obvious. These systems are different from the current invention which specifically limits the number of shots and monitors the presence of a magazine in the weapon, and then turns off the firing ability of the weapon if the magazine is not connected, if the operator runs out of "ammunition", or if the operator is hit, thereby enhancing the overall realism of the simulation (see specification page 9, line 14 to page 10, line 10). Therefore, claim 1, and the claims that depend thereon, is not obvious in view of the cited prior art because of the above described differences and it is requested that the \$103 rejection be withdrawn.

Based on the above amendments and remarks, applicant respectfully submits that all of Claims 1 and 3-9 are now allowable over the prior art and that the present application is in proper form for allowance. An early and favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'JVC', with a checkmark to its right.

James V. Costigan
Registration No.: 25,669

MAILING ADDRESS

Hedman & Costigan, P.C.
1185 Avenue of the Americas
New York, NY 10036
(212) 302-8989

MARKED UP COPY OF AMENDMENT TO CLAIMS

1. (amended) Equipment for detecting [that a target has received] a direct hit on a target by a signal from a simulated weapon in a system comprising [including] a weapon (10, 30) and a target (11, 12, 38, 45),
wherein:

- said weapon (10, 30) [providing] comprises a[n] signal emitter [of signals or laser shots] (14, 33) operated by a switch (16, 35) and a trigger (18, 36),
- said target consisting essentially of solar cells [including sensors] (19, 20, 38a, 41-44) affixed to a supporting element (12, 11, 38, 45), [- at least] said solar cells (19, 20, 38a, 41-44) provided with a red film, said [sensors] solar cells being operatively connected to an electronic detection circuit of a signal or laser shot received by said [sensors] solar cells,
- said supporting elements being worn by a[n user [and/]or animal] targeted individual,
- said emitter of signals or laser shots (14, 33) being [situated on the] associated with a barrel of a pistol (10) [and/]or a rifle (30),
- said equipment further comprising a control device [or control electronic circuit] (50) [characterized in that]wherein:
 - said control device [is built around] comprises a RISC [technology] microcontroller (56) with [the provision of] a power supply,
 - [a] said control device including a direct hit indicator (59), and a flashing green signaler (60) for indicating whether said weapon is unloaded, and a

magazine signaler (58) for detecting if [the presence of] magazines (17, 40) in said weapon are connected to said microcontroller (56), wherein said microcontroller (56) prevents said weapon from being fired when said hit indicator (59) is on.

3. (amended) Equipment according to claim 1, [characterized in that] wherein said supporting elements are a jacket (11) and a helmet (12).

4. (amended) Equipment according to claim 1, [characterized in that] wherein said supporting element[s are directly] is a target.

5. (amended) Equipment according to claim 1, [characterized in that] wherein said weapon is a pistol (10).

6. (amended) Equipment according to claim 1, [characterized in that] wherein said weapon is a rifle (30).

7. (amended) Equipment according to claim 1, [characterized in that in support of] wherein said microcontroller (56), [for that concerning the processing of a signal detected by said sensors (19, 20, 38a) is provided an] further comprises an amplification and filtering chain to eliminate random components from said signal and make said signal compatible with said microcontroller (56).

8. (amended) Equipment according to claim 7, [characterized in that] wherein said chain [includes] comprises an attenuator circuit (51) fitted upstream from an amplifier

(54), which is integrated upstream and downstream by high-pass filters (52), [there also being provided] further comprising a low-pass filter (53) on a power supply, wherein an output of said amplifier (54) is [clipped and made compatible with] attached to said microcontroller (56) by a Schmitt trigger (55) [which, with] possessing a 1% opening of the voltage[, there being] which allows an additional low-pass filter (53) [,] to remove[s] all the possible high frequency components which could interfere with the functioning of said microcontroller (56).

9. (amended) Equipment according to claim 1, [characterized in that to] wherein said microcontroller (56) is connected to a generator of differentiated sound effects.